## CL AIMS

- (Currently amended) A medical article comprising an implantable substrate having a coating, the coating including a polymeric product of a reaction between a first reagent, a second reagent, and a third reagent, wherein:
- (a) the first reagent is selected from a group consisting of compounds having formulae (1), (2), (3), and (4):

$$HO-X-OH$$
 (3)

$$H_2N-Y-NH_2 \tag{4}$$

(b) the second reagent is selected from a group consisting of compounds having formulae (5), (6), (7), and (8):

$$HO-R_4-OH$$
 (7)

- $H_2N-R_4-NH_2$
- (8)
- (c) the third reagent is a dicarboxylic acid having the formula (9):

wherein:

R<sub>1</sub> is hydrogen, methyl, iso-propyl, sec-butyl; iso-butyl, or benzyl group;

R<sub>2</sub> is methylene, methylmethylene, n-propylene, iso-propylene, ethylmethylene, n-butylene, iso-butylene, sec-butylene, or n-amylene group;

 $R_3$  is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is an integer between 2 and 12:

R<sub>4</sub> is a moiety derived from a compound selected from a group consisting of poly(ethylene glycol), poly(propylene glycol), random poly(ethylene glycol-co-propylene glycol), poly(ethylene glycol)-block-poly(propylene glycol), hyalurenic acid, pely(2-hydroxyethyl-methacrylate), poly(3-hydroxypropylmethacrylamide), poly(styrene sulfonate), and poly(vinyl pyrrolidone), and cellulosics;

X is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is an integer between 2 and 12; and

Y is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is 1, 2, or 5.

- (Original) The medical article of Claim 1, wherein the implantable substrate is a stent.
- (Original) The medical article of Claim 1, wherein the compound of formula
   is a diol-diamine, the diol-diamine is a product of condensation of an amino acid and a diol.

 (Original) The medical article of Claim 3, wherein the amino acid has the formula (10):

$$H_2N$$
— $CHR_4$ — $COOH$ . (10)

- (Original) The medical article of Claim 3, wherein the amino acid is selected from a group consisting of glycine, alanine, valine, isoleucine, leucine, and phenyl alanine.
- 6. (Original) The medical article of Claim 3, wherein a diol is selected from a group consisting of ethylene glycol, 1,3-propanediol, 1,4-butane diol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,9-nonanediol, 1,10-decanediol, 1,11-undecanediol, and 1,12-dodecanediol.
- (Withdrawn) The medical article of Claim 1, wherein the compound of formula (2) is an amidediol, the amidediol is a product of condensation of a hydroxy acid and a diamine
- 8. (Withdrawn) The medical article of Claim 7, wherein the hydroxy acid has the formula (11):

$$HO-R_2-COOH.$$
 (11)

- 9. (Withdrawn) The medical article of Claim 7, wherein the hydroxy acid is selected from a group consisting of glycolic acid, lactic acid,  $\beta$ -hydroxybutyric acid,  $\alpha$ -hydroxyvaleric acid, and  $\epsilon$ -hydroxycaproic acid.
- 10. (Withdrawn) The medical article of Claim 7, wherein the diamine is selected from a group consisting of putrescine, 1,2-ethanediamine, and cadavarene.

- 11. (Withdrawn) The medical article of Claim 1, wherein the compound of formula (3) is selected from a group consisting of ethylene glycol, 1,3-propanediol, 1,4-butane diol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,9-nonanediol, 1,10-decanediol, 1,11-undecanediol, and 1,12-dodecanediol.
- 12. (Withdrawn) The medical article of Claim 1, wherein the compound of formula (4) is selected from a group consisting of putrescine, 1,2-ethanediamine, and cadavarene.
- 13. (Original) The medical article of Claim 1, wherein the compound of formula (5) is a PEG-diester-diamine conjugate, the conjugate is a product of condensation of an amino acid and poly(ethylene glycol).
- 14. (Original) The medical article of Claim 13, wherein the amino acid has the formula (10):

(10)

- 15. (Original) The medical article of Claim 13, wherein the amino acid is selected from a group consisting of glycine, alanine, valine, isoleucine, leucine, phenyl alanine, tyrosine, serine, and glutamic acid.
- 16. (Withdrawn) The medical article of Claim 1, wherein the compound of formula (6) is a PEG-amidediol conjugate, the conjugate is a product of condensation of a hydroxy acid and PEG-diamine.

17. (Withdrawn) The medical article of Claim 16, wherein the hydroxy acid has the formula (11):

$$HO-R_2-COOH$$
. (11)

- 18. (Withdrawn) The medical article of Claim 17, wherein the hydroxy acid is selected from a group consisting of glycolic acid, lactic acid, β-hydroxybutyric acid, α-hydroxyvaleric acid, and ε-hydroxycaproic acid.
- 19. (Currently amended) A medical article comprising an implantable substrate having a coating, the coating including a copolymer having a general formula (12) or (13):

$$-[M-P]_m-[M-Q]_n-$$
 (12)

$$-[\mathsf{M}_1 - \mathsf{P}]_{\rho} - \tag{13}$$

wherein:

M is a moiety represented by the structure having the formula (14)

P is a moiety selected from a group consisting of structures having the formulae (15), (16), (17), and (18):

$$-O-X-O-$$
 (17)

$$-NH-Y-NH-$$
 (18)

Q is a moiety selected from a group consisting of structures having the formulae (19), (20), and (21)

M<sub>1</sub> is a moiety represented by the structure having the formula (22):

R<sub>1</sub> is hydrogen, methyl, *iso*-propyl, *sec*-butyl; *iso*-butyl, or benzyl group;

 $R_2$  is methylene, methylmethylene, n-propylene, iso-propylene, ethylmethylene, n-butylene, iso-butylene, sec-butylene, or n-amylene group:

 $R_3$  is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is an integer between 2 and 12;

X is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is an integer between 2 and 12;

Y is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is 1, 2, or 5;

Z is a moiety derived from a compound selected from a group consisting of poly(ethylene glycol), poly(propylene glycol), random poly(ethylene glycol-co-propylene glycol), poly(ethylene glycol)-block-poly(propylene glycol), hyaluronic acid, poly(2-hydroxyethyl-methacrylate), poly(3-hydroxyethyl-methacrylate), poly(3-hydroxypropylmethacrylamide), poly(styrene sulfonate), and poly(vinyl pyrrolidone, and cellulosics; and

m, n, and p are integers where the value of m is between 5 and 1,800, the value of n is between 1 and 800 and the value of p is between 4 and 1,500.

20. (Original) The medical article of Claim 19, wherein the polymer is selected from a group consisting of copolymers of formulae (23), (24), (25), (26), (27), (28), (29), (30), (31), (32), (33), (34), (35), (36), (37), (38), (39), (40), (41), (42), and (43):

$$\begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-(CH_{3})_{4}-O-C-CH-NH \\ \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-C-CH-NH \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-O-C-C-C-C-C-C-H_{3} \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-CH-C-C-H_{3} \\ C-(CH_{3})_{3}-C-NH-CH-C-C-O-C-C-C-C-C-H_{3} \\ 0.47 \end{pmatrix} = \begin{pmatrix} CH_{3}-CH-CH_{3} & CH_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3}-C-H_{3} \\ C-(CH_{3})_{3}-C-H_{3} \\ C-($$

(23)

$$\begin{bmatrix} \bigcirc & \bigcirc & CH_3 & \bigcirc &$$

(24)

$$\begin{bmatrix} CH_{2}-CH-CH_{3} & CH_{2}-CH-CH_{3} \\ O & CH_{2} & O \\ C-NH_{2}-CH_{3} & O \\ C-NH_{2}-CH_{3} & O \\ C-NH_{3}-CH_{3} & O \\ C-NH_{$$

(25)

(26)

$$\begin{bmatrix} CH_0-CH-CH_1 & CH_1-CH-CH_2 \\ O & CH_2 & O & CH_3 \\ C^+CH_2^+g^-C-NH-CH^-C^-O^-CH_2^+O^-C^-CH-NH_2^+g^-C^-O^-CH^-C^-NH-PEG_{600}^-NH-C^-CH^-O^-_{11} \\ C^+CH_2^-g^-C^-NH-CH^-C^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH-CH^-C^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH-PEG_{600}^-NH-C^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH^-CH^-O^-_{12} \\ C^-CH_2^-g^-C^-NH^-CH^-O^-_{12} \\ C^-CH^-O^-_{12} \\ C^-CH^-$$

(27)

$$\begin{bmatrix} 0 & CH_1 & O & CH_2 & O & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & O & CH_3 \\ -C - CH_2 & C & CH_2 & C & CH_3 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & C & CH_3 \\ -C - CH_2 & C & CH_2 & C & CH_3 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 & C & CH_3 \\ -C - CH_2 & C & CH_3 & C & CH_4 \\ -C - CH_2 & C & CH_3 & C & CH_4 \\ -C - CH_2 & C & CH_3 & C & CH_4 \\ -C - CH_2 & C & CH_3 & C & CH_4 \\ -C - CH_2 & C & CH_3 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_3 & C & CH_4 & C & CH_4 \\ -C - CH_4 & C$$

28)

$$\begin{bmatrix} c_{H_0-CH-CH_0} & c_{H_0-CH-CH_0} \\ c_{-C_{H_0}} & c_{-C_{H_0}} & c_{-C_{H_0}} \\ c_{-C_{H_0}} & c_{-C_{H_0$$

(29)

$$\begin{bmatrix} O & O & CH_3 & O & CH_3 \\ -C - CH_2 \end{bmatrix}_{8} C - O - CH - C - NH + CH_2 \end{bmatrix}_{4} NH - C - CH - O \end{bmatrix}_{m} \begin{bmatrix} O & O & O \\ -C - CH_2 \end{bmatrix}_{8} C - O - PEG_{500} - O \end{bmatrix}_{n}$$

(30)

$$\begin{bmatrix} o & O & CH_3 & O & CH_3 \\ -C - CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - O - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - CH - C - NH + CH_2 & NH - C - CH - O \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C - CH_2 & C - CH_2 \\ -C + CH_2 & C$$

(31)

$$\begin{bmatrix} O & O & CH_3 & O$$

$$\begin{array}{c|c} & & & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & & \\ & & & & & & & & & & & & & \\ & & & & & & & & & & & & \\ & & & & & & & & & & & & \\ & & & & & & & & & & & \\ & & & & & & & & & & \\ & & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & & \\ & & & \\ & & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & & \\$$

(34)

(35)

$$= \begin{bmatrix} O & O & CH_3 & O & O & CH_3 \\ C & CH_2 & C & NH & CH_2 & NH & M & CH_2 &$$

(36)

$$= \begin{bmatrix} O & O & O & O \\ C & C & H_2 \end{bmatrix}_8^0 C - NH + \begin{bmatrix} CH_2 \end{bmatrix}_4^2 NH$$

(37)

(38)

$$\begin{bmatrix} O & O & CH_3 & O & O & CH_3 \\ || & || & || & || & || & || \\ C - PEG_{1000} - C - O - CH - C - NH + CH_2 + NH - C - CH - O + NH_2 \end{bmatrix}$$

(39)

$$- \begin{bmatrix} 0 & CH_3 & O & CH_3 & O & CH_3 \\ C-(CH_2)_T & C-N_{11}-CH-C-O-(CH_2)_T & O & C-C_{11}-N_{11} \\ C-(CH_2)_T & C-N_{11}-C_{11}-C-O-PEG_{300} & O & CH_3 \\ O & C-(CH_3)_T & C-N_{11}-C_{11}-C-O-PEG_{300} & O & CH_3 \\ O & C-(CH_3)_T & C-N_{11}-C_{11}-C-O-PEG_{300} & O & CH_3 \\ O & C-(CH_3)_T & C-N_{11}-C-O-PEG_{300} & O & C-C_{11}-N_{11} \\ O & C-(CH_3)_T & C-N_{11}-C-O-PEG_{300} & O & C-C_{11}-N_{11} \\ O & C-(CH_3)_T & C-N_{11}-C-O-PEG_{300} & O & C-C_{11}-N_{11} \\ O & C-(CH_3)_T & C-N_{11}-C-O-PEG_{300} & O & C-C_{11}-N_{11} \\ O & C-(CH_3)_T & C-N_{11}-C-O-PEG_{300} & O & C-C_{11}-N_{11} \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)_T & C-(CH_3)_T \\ O & C-(CH_3)_T & C-(CH_3)$$

(40)

(41)

(42)

(43)

- 21. (Currently amended) A method for fabricating a medical article, the method including synthesizing a copolymer and forming a coating based on the copolymer on at least a portion of an implantable substrate, the synthesizing of the copolymer including reacting a first reagent with a second reagent and with a third reagent, wherein:
- (a) the first reagent is selected from a group consisting of compounds having formulae (1), (2), (3), and (4):

$$HO-X-OH$$
 (3)

$$H_0N-Y-NH_2$$
 (4)

(b) the second reagent is selected from a group consisting of compounds having formulae (5), (6), (7), and (8):

$$HO-R_4-OH$$
 (7)

(c) the third reagent is a dicarboxylic acid having the formula (9):

wherein:

 $R_1$  is hydrogen, methyl, iso-propyl, sec-butyl; iso-butyl, or benzyl group;

R<sub>2</sub> is methylene, methylmethylene, n-propylene, iso-propylene, ethylmethylene, n-butylene, iso-butylene, sec-butylene, or n-amylene group;

 $R_3$  is a straight chained or branched aliphatic alkylene group  $C_n H_{2n}$ , wherein n is an integer between 2 and 12:

R<sub>4</sub> is a moiety derived from a compound selected from a group consisting of poly(ethylene glycol), poly(propylene glycol), random poly(ethylene glycol-co-propylene glycol), poly(ethylene glycol)-block-poly(propylene glycol), hyalurenic acid, poly(2-hydroxyethyl-methacrylate), poly(3-hydroxypropylmethacrylamide), poly(styrene sulfenate), and-poly(vinyl pyrrolidone), and cellulosics;

X is a straight chained or branched aliphatic alkylene group  $C_n H_{2n}$ , wherein n is an integer between 2 and 12:

Y is a straight chained or branched aliphatic alkylene group  $C_n H_{2n}$ , wherein n is 1, 2, or 5.

- (Original) The method of Claim 21, wherein the implantable substrate is a stent.
- 23. (Original) The method of Claim 21, wherein the molar ratio between the first reagent, the second reagent, and the third reagent is about 1:1:2.
- 24. (Original) The method of Claim 21, wherein the compound of formula (1) is a diol-diamine, the diol-diamine is a product of condensation of an amino acid and a diol.
- 25. (Withdrawn) The method of Claim 24, wherein the amino acid has the formula (10):

$$H_2N$$
— $CHR_1$ — $COOH$ . (10)

26. (Original) The method of Claim 24, wherein the amino acid is selected from a group consisting of glycine, alanine, valine, isoleucine, leucine, and phenyl alanine.

- 27. (Original) The method of Claim 24, wherein a diol is selected from a group consisting of ethylene glycol, 1,3-propanediol, 1,4-butane diol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,9-nonanediol, 1,10-decanediol, 1,11-undecanediol, and 1,12-dodecanediol.
- 28. (Withdrawn) The method of Claim 21, wherein the compound of formula (2) is an amidediol, the amidediol is a product of condensation of a hydroxy acid and a diamine
- (Withdrawn) The method article of Claim 28, wherein the hydroxy acid has the formula (11):

$$HO-R_2-COOH.$$
 (11)

- 30. (Withdrawn) The method of Claim 28, wherein the hydroxy acid is selected from a group consisting of glycolic acid, lactic acid, β-hydroxybutyric acid, αhydroxyvaleric acid, and ε-hydroxycaproic acid.
- 31. (Withdrawn) The method of Claim 28, wherein the diamine is selected from a group consisting of putrescine, 1,2-ethanediamine, and cadavarene.
- 32. (Withdrawn) The method of Claim 21, wherein the compound of formula (3) is selected from a group consisting of ethylene glycol, 1,3-propanediol, 1,4-butane diol, 1,5-pentanediol, 1,6-hexanediol, 1,7-heptanediol, 1,8-octanediol, 1,9-nonanediol, 1,10-decanediol, 1,11-undecanediol, and 1,12-dodecanediol.
- 33. (Withdrawn) The method of Claim 21, wherein the compound of formula (4) is selected from a group consisting of putrescine, 1,2-ethanediamine, and cadavarene.

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34. (Original) The method of Claim 21, wherein the compound of formula (5) is a PEG-diester-diamine conjugate, the conjugate is a product of condensation of an amino acid and poly(ethylene glycol).

 (Withdrawn) The method of Claim 34, wherein the amino acid has the formula (10):

$$H_2N$$
— $CHR_4$ — $COOH$ . (10)

- 36. (Withdrawn) The method of Claim 34, wherein the amino acid is selected from a group consisting of glycine, alanine, valine, isoleucine, leucine, phenyl alanine, tyrosine, serine, and glutamic acid.
- 37. (Withdrawn) The method of Claim 21, wherein the compound of formula (6) is a PEG-amidediol conjugate, the conjugate is a product of condensation of a hydroxy acid and PEG-diamine.
- 38. (Withdrawn) The method of Claim 37, wherein the hydroxy acid has the formula (11):

$$HO-R_2-COOH.$$
 (11)

- 39. (Withdrawn) The method of Claim 37, wherein the hydroxy acid is selected from a group consisting of glycolic acid, lactic acid, β-hydroxybutyric acid, αhydroxyvaleric acid, and ε-hydroxycaproic acid.
- 40. (Currently amended) A method for fabricating a medical article, the method including synthesizing a copolymer and forming a coating based on the copolymer on at

least a portion of an implantable substrate, wherein the copolymer has a general formula (12) or (13):

$$-[M-P]_{m}-[M-Q]_{n}-$$
(12)

$$-[M_1-P]_p-$$
 (13)

wherein:

M is a moiety represented by the structure having the formula (14)

P is a moiety selected from a group consisting of structures having the formulae (15), (16), (17), and (18):

$$-O-X-O-$$
 (17)

$$-NH-Y-NH- (18)$$

Q is a moiety selected from a group consisting of structures having the formulae (19), (20), and (21)

$$R_1$$
 O O  $R_1$   
 $\begin{vmatrix} 1 & 1 & 1 \\ -NH-CH-C-O-Z-O-C-CH-NH- \end{vmatrix}$  (19)

M<sub>1</sub> is a moiety represented by the structure having the formula (22):

R<sub>1</sub> is hydrogen, methyl, iso-propyl, sec-butyl; iso-butyl, or benzyl group;

R<sub>2</sub> is methylene, methylmethylene, *n*-propylene, *iso*-propylene, ethylmethylene, *n*-butylene, *iso*-butylene, *seo*-butylene, or *n*-amylene group;

 $R_3$  is a straight chained or branched aliphatic alkylene group  $C_n H_{2n}$ , wherein n is an integer between 2 and 12:

X is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is an integer between 2 and 12;

Y is a straight chained or branched aliphatic alkylene group  $C_nH_{2n}$ , wherein n is 1, 2, or 5; and

Z is a moiety derived from a compound selected from a group consisting of poly(ethylene glycol), poly(propylene glycol), random poly(ethylene glycol-co-propylene glycol), poly(ethylene glycol)-block-poly(propylene glycol), hyalurenic acid, poly(2-hydroxyethyl-methacrylate), poly(3-hydroxypropylmethacrylamide), poly(styrene sulfenate), and poly(vinyl pyrrolidone, and cellulosics; and

m, n, and p are integers where the value of m is between 5 and 1,800, the value of n is between 1 and 800 and the value of p is between 4 and 1,500.

41. (Original) The method of Claim 40, wherein the copolymer is selected from a group consisting of copolymers of formulae (23), (24), (25), (26), (27), (28), (29), (30), (31), (32), (33), (34), (35), (36), (37), (38), (39), (40), (41), (42), and (43):

$$= \begin{bmatrix} CH_1 - CH - CH_1 & CH_2 - CH - CH_1 & CH_3 - CH - CH_1 & CH_5 - CH - CH_1 & CH_4 - CH - CH_1 \\ 0 & CH_2 & CH_2 & CH_3 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_2 & CH_3 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_3 & CH_4 \\ 0 & CH_3 & CH_4 \\ 0 & CH_3 & CH_4 \\ 0 & CH_3 & CH_4 \\ 0 & CH_4 \\ 0 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 & CH_4 \\ 0 & CH_4 & CH_4 & CH_4 \\ 0 & CH_$$

(23)

24)

$$\begin{bmatrix} CH_{2}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ CH_{2}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ CH_{2}-CH-CH_{3} & CH_{3}-CH-CH_{3} \\ CH_{3}-CH-CH_{3} \\ CH_{3}-CH-CH_{3} \\ CH_{3}-CH-CH_{3} \\ CH_{3}-C$$

(25)

(26)

$$\begin{bmatrix} CH_{2}-CH_{2}-CH_{3} & CH_{2}-CH_{2}-CH_{3} \\ O & CH_{3} & O & CH_{4} \\ C+CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{3} \\ C+CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{2}-CH_{2} \\ C+CH_{2}-$$

27

$$\begin{bmatrix} 0 & CH_1 & 0 & CH_2 & CH_3 & CH_4 & CH_3 & CH_4 & CH_4 & CH_5 & CH_$$

28)

$$\begin{bmatrix} O & CH_1 & CH_2 - CH_2 \\ C & CH_2 & C & CH_3 \\ C & CH_2 & C & CH_4 \\ C & CH_2 & C & CH_2 \\ C & CH_2 & C & CH_3 \\ C & CH_2 & C & C \\ C & CH_2 & C$$

(29)

$$\begin{bmatrix} O & O & CH_3 & O & CH_3 \\ -C - CH_2 \end{bmatrix}_{8} C - O - CH - C - NH + CH_2 \end{bmatrix}_{4} NH - C - CH - O \end{bmatrix}_{m} \begin{bmatrix} O & O & O \\ -C - CH_2 \end{bmatrix}_{8} C - O - PEG_{300} - O \end{bmatrix}_{n}$$

(30)

(31)

(34)

(35)

(36)

(37)

(38)

$$\begin{bmatrix} O & O & CH_3 & O & O & CH_3 \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ C - PEG_{1000} - C - O - CH - C - NH + CH_2 + NH - C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH - O + NH + CH_2 + NH + C - CH$$

(39)

(40)

(41)

22

$$= \begin{bmatrix} CH_3-CH-CH_3 & CH_3-CH-CH_3 & CH_3-CH-CH_3 \\ CH_3-CH-CH_3 & CH_3-CH-CH_3 \\ C-(CH_3)_2 & C-NH-CH-C-O-(CH_3)_3 & O-C-CH-NH \\ C-(CH_3)_2 & C-NH-CH-C-O-PEG_{00}-O-C-CH-NH \\ \end{bmatrix}_{0.18}$$

(42)

$$= \begin{bmatrix} 0 & 0 & CH_3 & 0 & 0 & CH_3 \\ -C & -C & -CI + C - NII + (CH_2)_4 & NII + C - CI + O \end{bmatrix} \begin{bmatrix} 0 & CH_3 & 0 & CH_3 \\ -C & -C & -CI + C - ED600 - C - CI + O \end{bmatrix}_{0.19}$$

(43)